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(54) **PORTABLE ELECTRONIC DEVICE CASE**

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G06F 1/16 (2006.01)
H05K 5/02 (2006.01)
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CPC ***H05K 5/0217*** (2013.01); ***F16F 7/00*** (2013.01); ***H04M 1/185*** (2013.01)

(58) **Field of Classification Search**
CPC G06F 3/041; G06F 1/16; G02F 1/1333
USPC 206/586, 1.5, 775, 231, 338; 348/376; 362/206, 474, 489, 23.19, 237, 267, 362/235, 294, 187, 373, 218, 191; 361/679.55, 679.02, 679.32, 679.08, 361/679.09, 679.52, 679.26, 679.47, 361/679.54, 679.31, 679.01, 679.33; 248/633, 636, 483, 454, 455, 459, 174, 248/152
See application file for complete search history.

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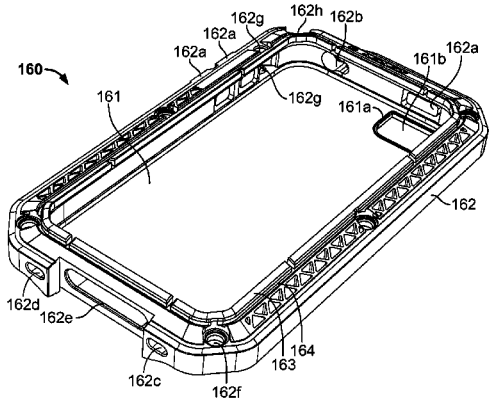
(57) **ABSTRACT**

Various embodiments of the present disclosure provide a flexible boot for at least partially encompassing an electronic device. In one embodiment, the boot includes a rear panel and a sidewall extending from the real panel. The sidewall includes an inner surface, an outer surface, and a plurality of compressible hollow regions positioned between the inner surface and the outer surface. The rear panel and the inner surface of the sidewall at least partially define a cavity configured to receive the device. Other embodiments of the present disclosure provide a case for housing an electronic device. In one embodiment, the case includes an elastomeric boot and a rigid posterior portion defining an opening therethrough through which a portion of the boot extends. The boot includes a sidewall and is configured to receive the device such that the sidewall at least partially surrounds a plurality of lateral sides of the device.

20 Claims, 9 Drawing Sheets



(51) **Int. Cl.**
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F16F 7/00 (2006.01)

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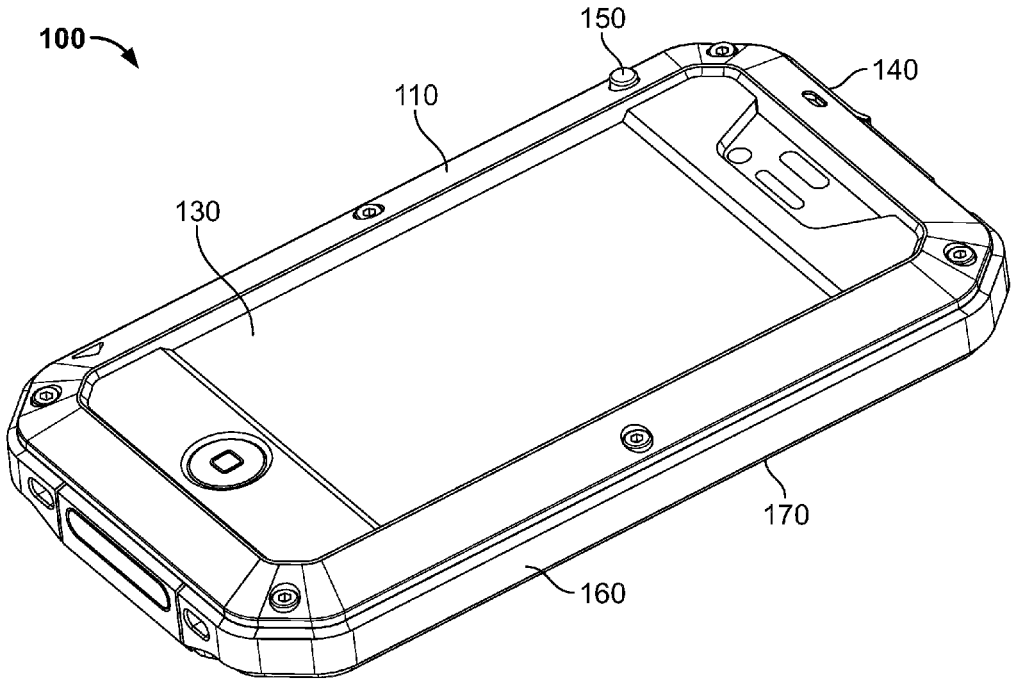


FIG. 1A

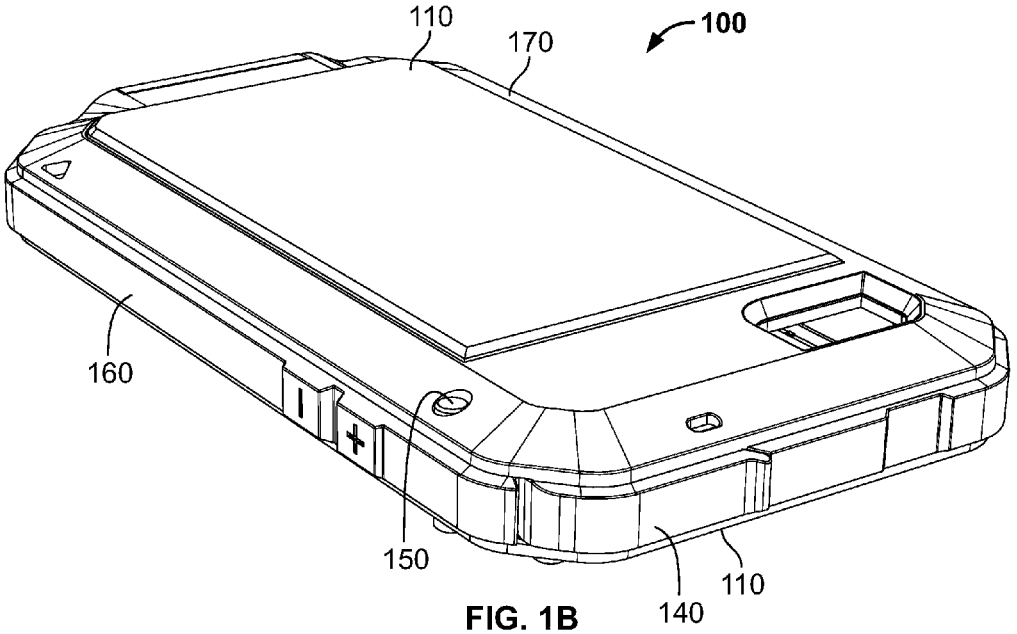


FIG. 1B

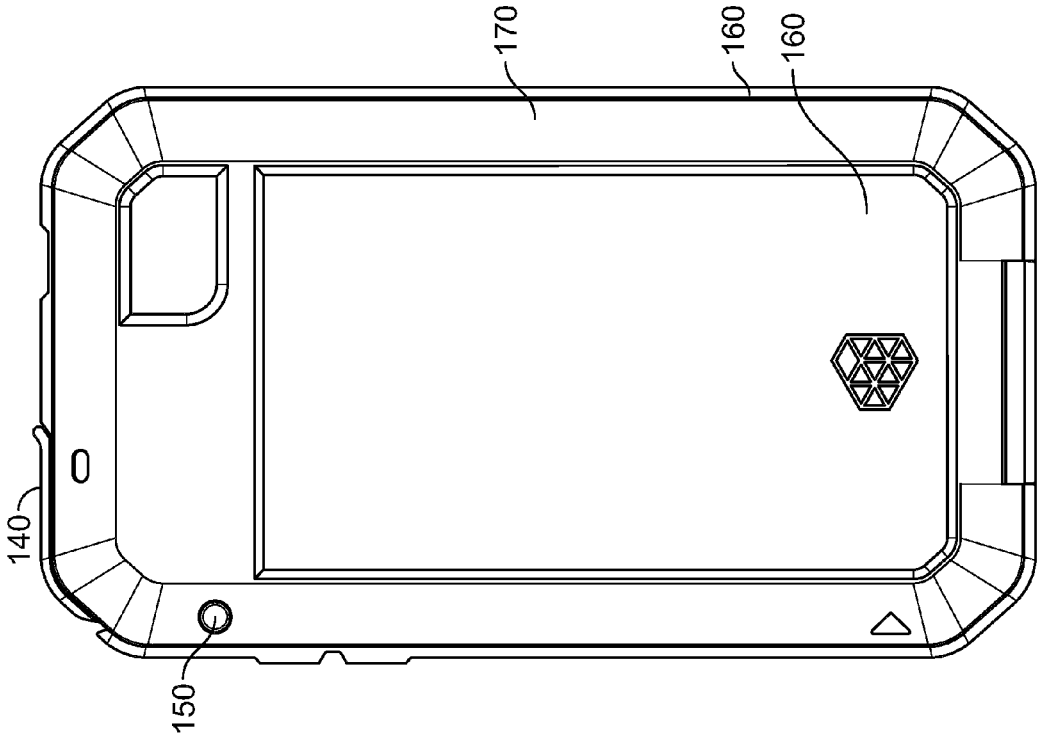


FIG. 1D

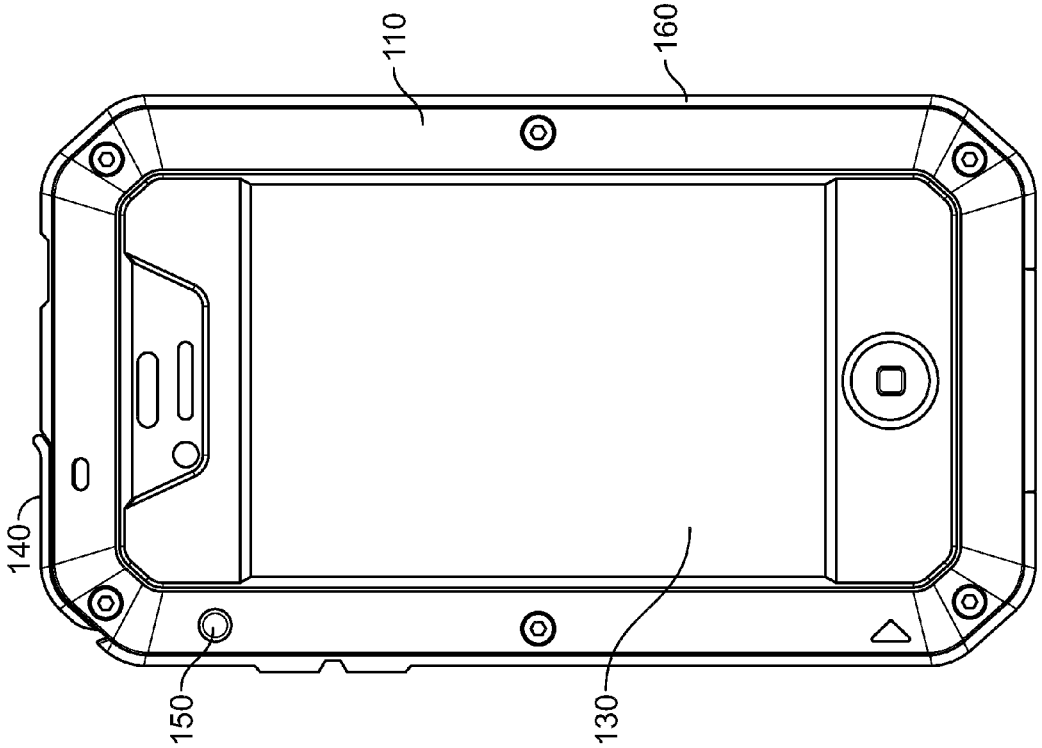
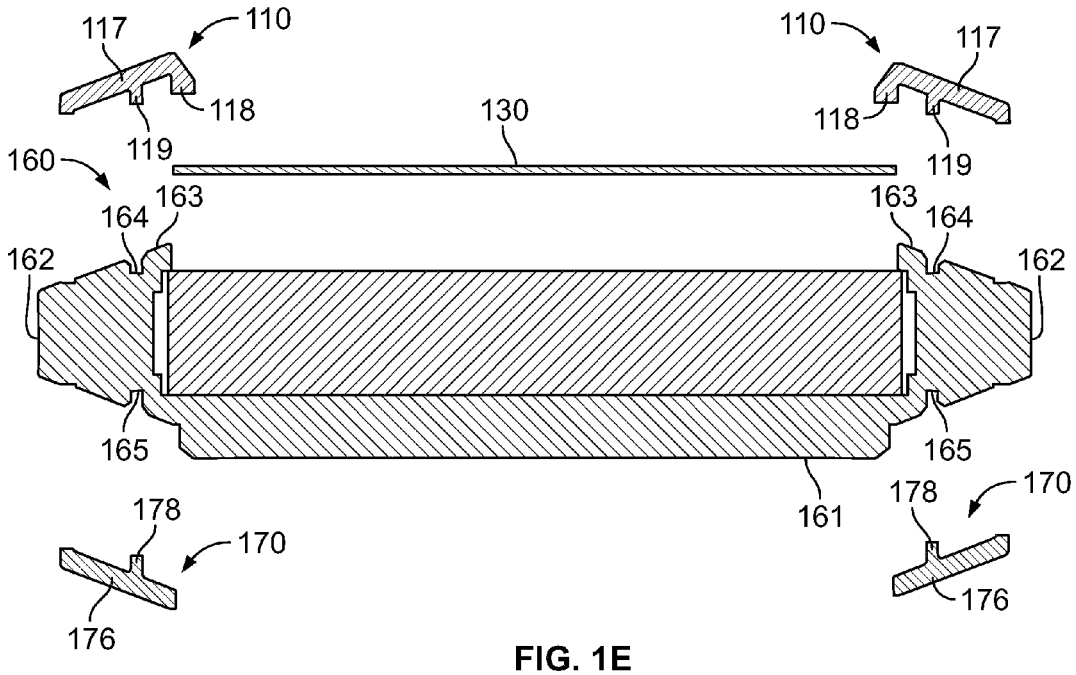


FIG. 1C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130
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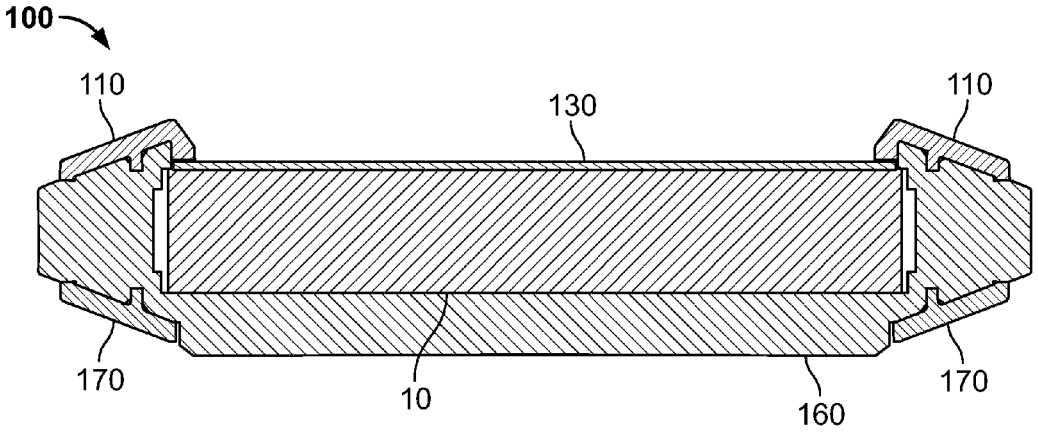
FIG. 1E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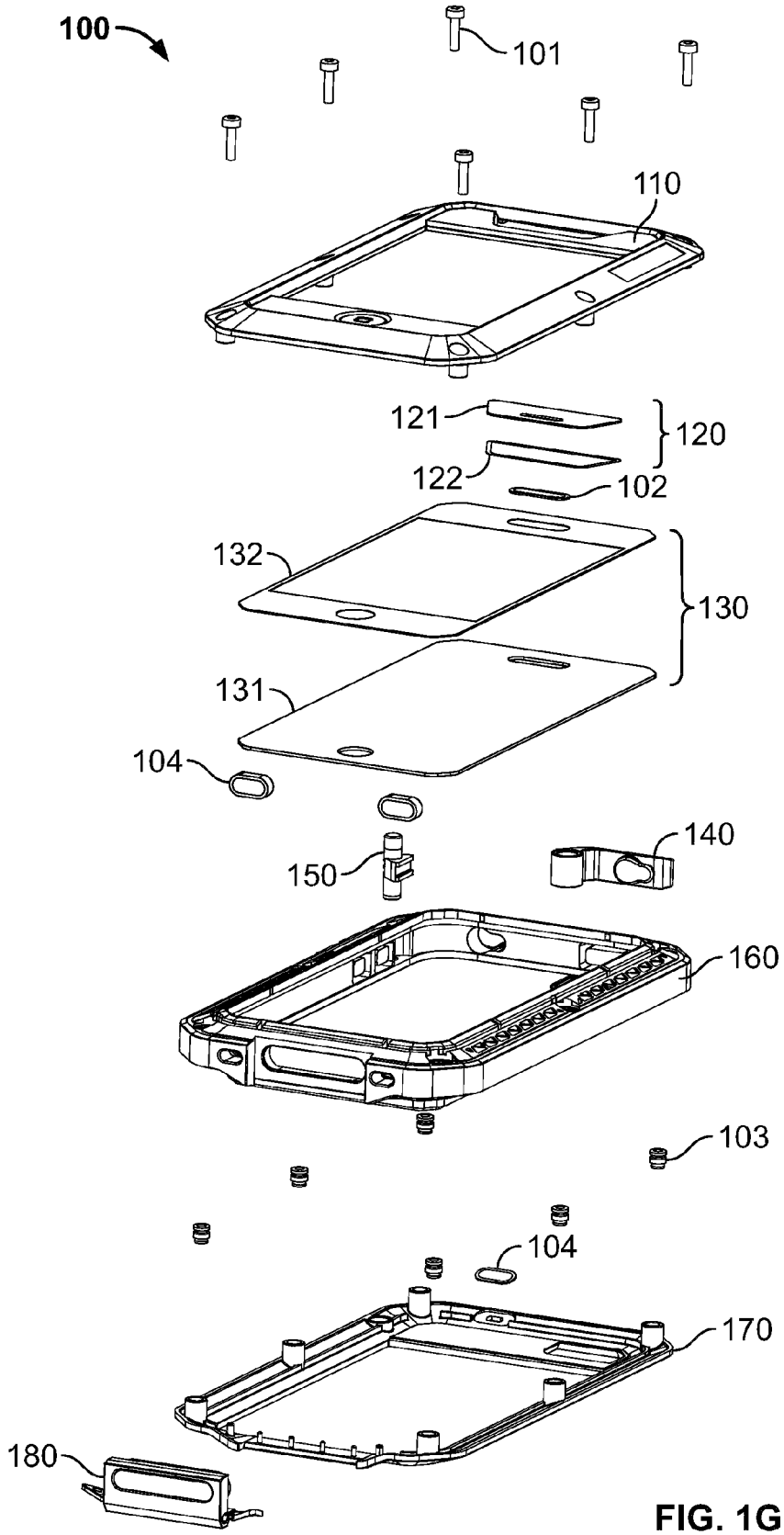
110
130
110
170
170
10
160

FIG. 1F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101
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121
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104
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150
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104
170
180

FIG. 1G

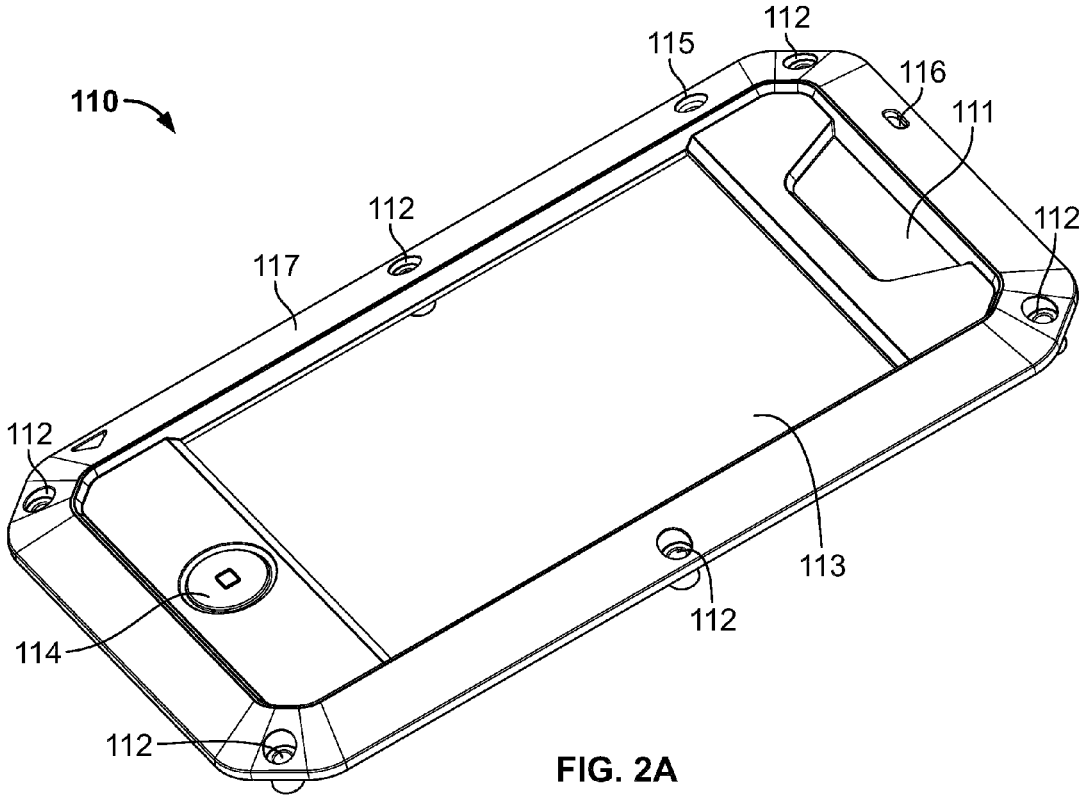


FIG. 2A

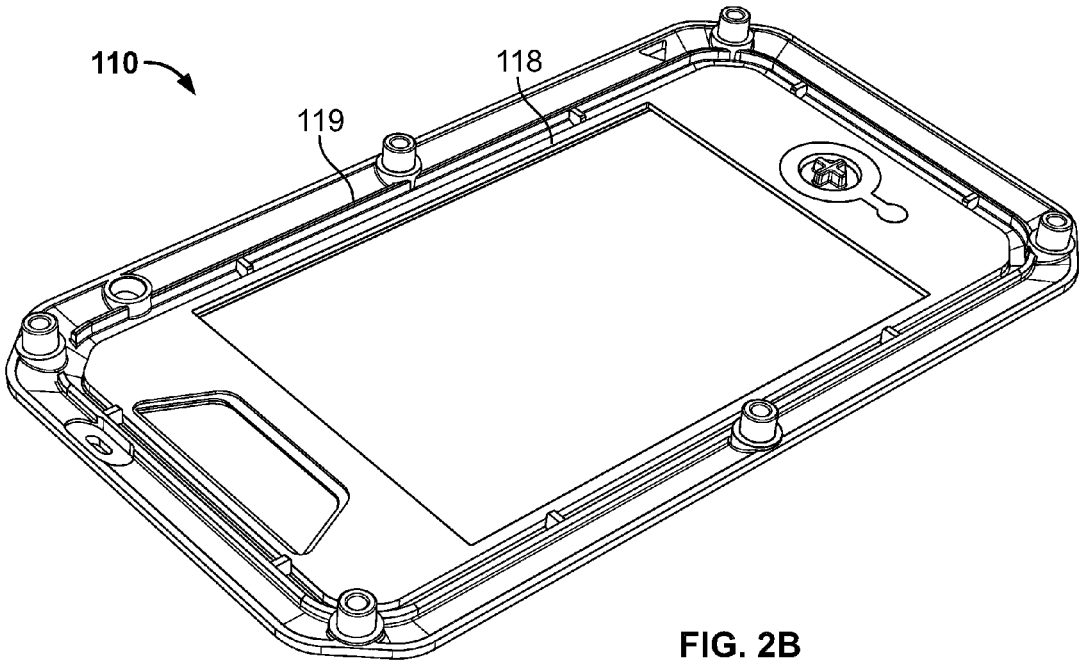


FIG. 2B

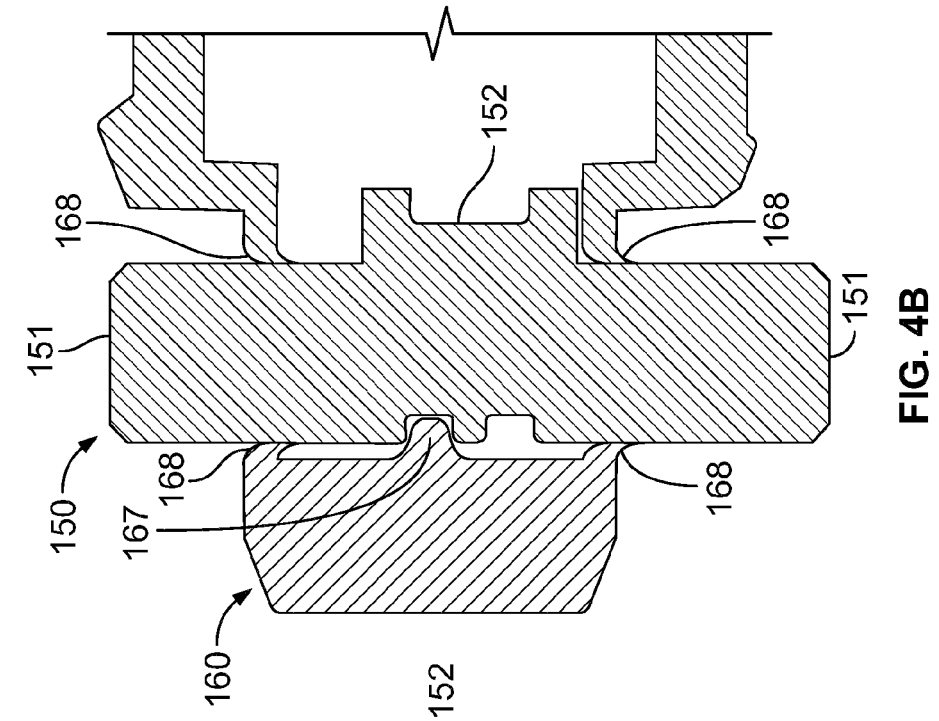


FIG. 4B

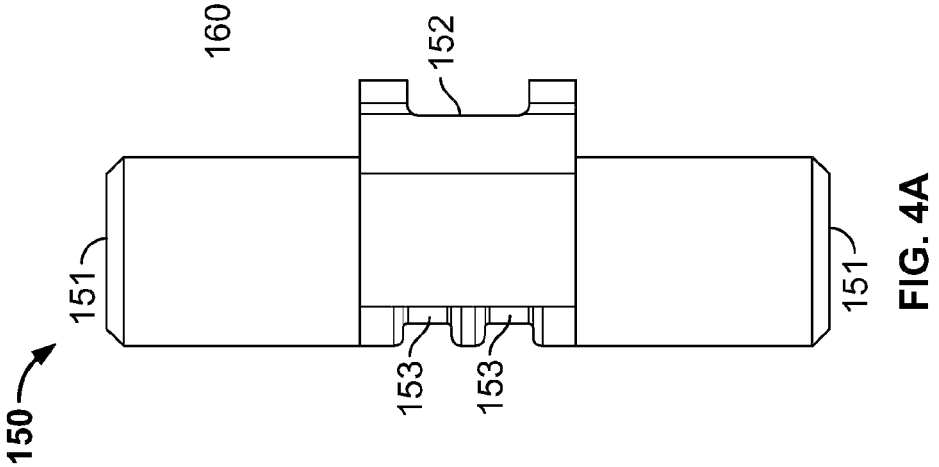


FIG. 4A

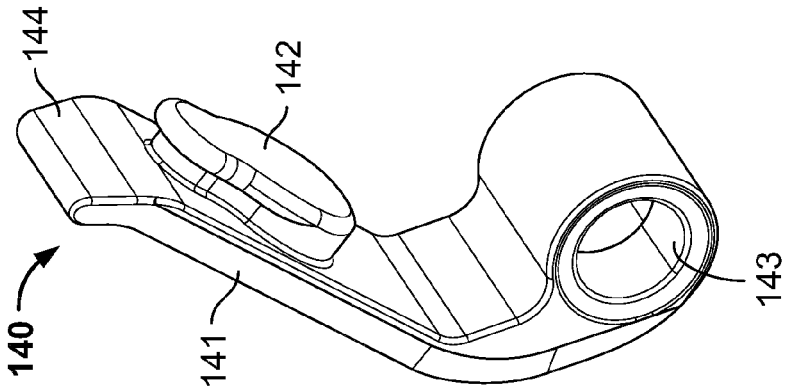


FIG. 3

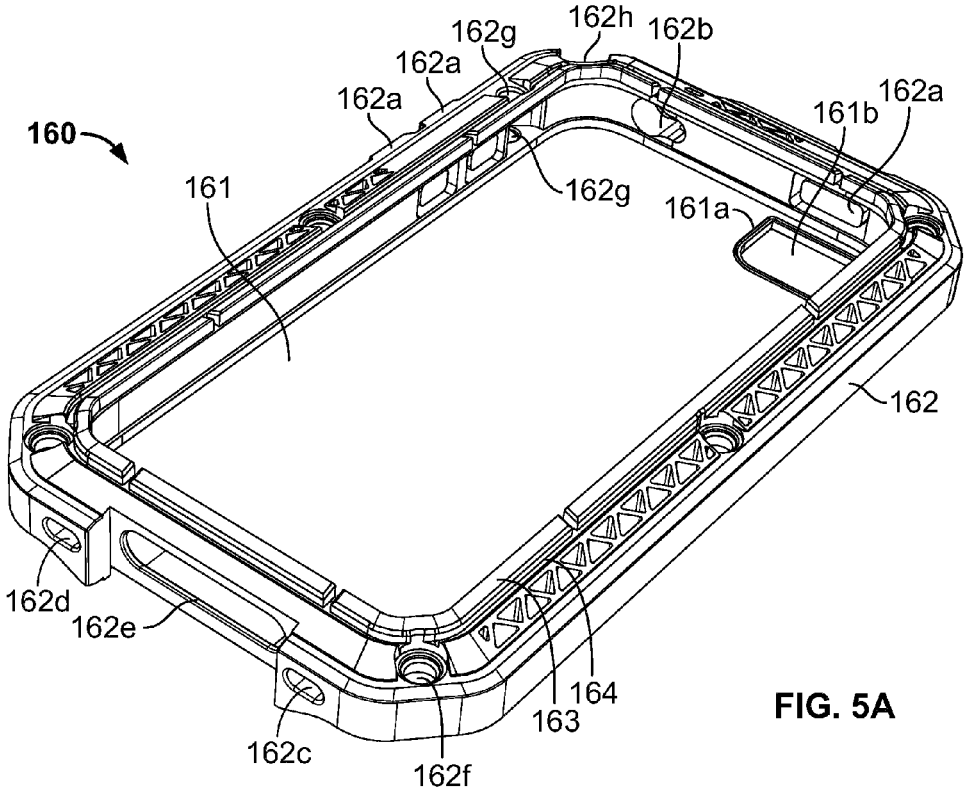
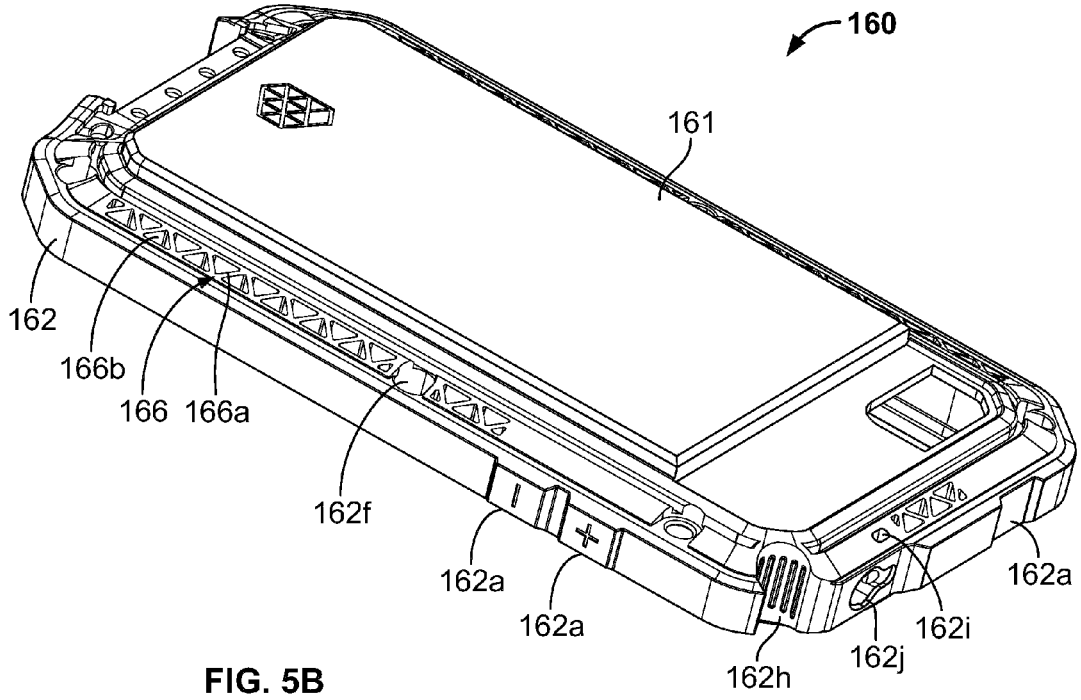

160
161
162g
162h
162b
162a
162a
161b
162a
162g
161a
162
162d
162e
164
163
162c
162f

FIG. 5A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162
166b
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166a
162f
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162a
162h
162j
162i
162a

FIG. 5B

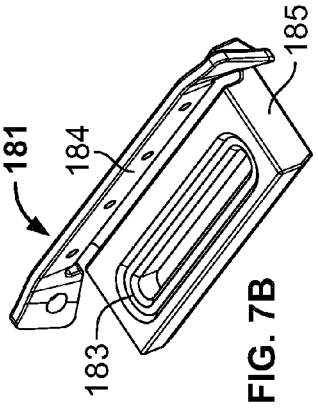

FIG. 7B

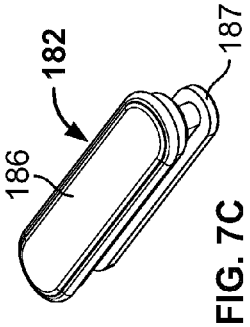

FIG. 7C

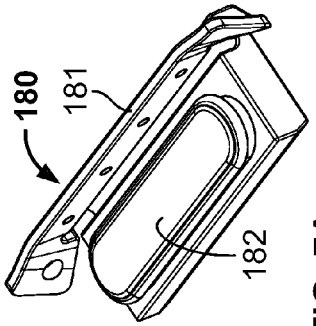

FIG. 7A

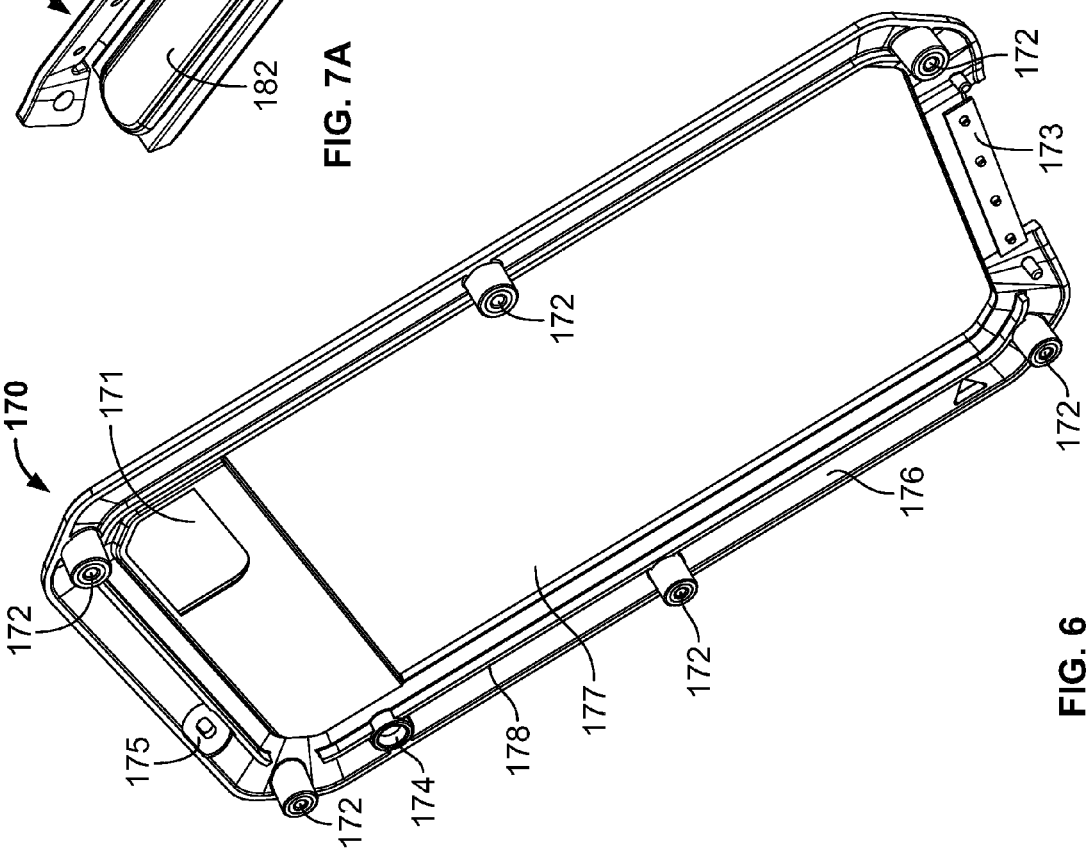

FIG. 6

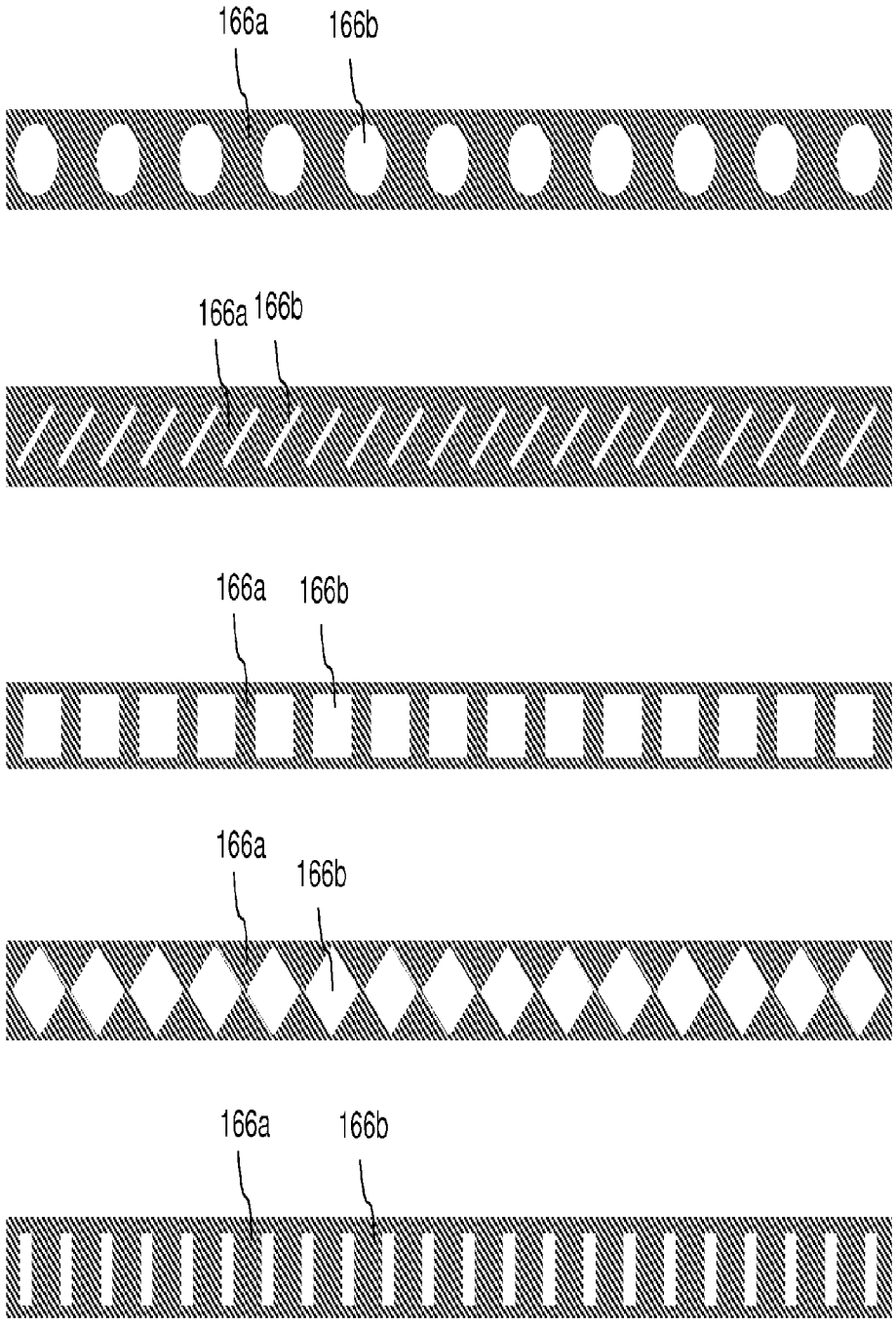

FIG. 8

PORTABLE ELECTRONIC DEVICE CASE

PRIORITY CLAIM

This application is a continuation of, and claims priority to and the benefit of, U.S. patent application Ser. No. 13/494,170, filed on Jun. 12, 2012, which is a continuation-in-part of, and claims priority to and the benefit of, U.S. Design patent application No. 29/418,314, filed on Apr. 13, 2012, which issued as U.S. Design Pat. No. D683,338 on May 28, 2013, the entire contents of each of which are incorporated herein by reference.

BACKGROUND

Generally, this application relates to cases for portable electronic devices. A case may be used to protect a portable electronic device (or, more simply, a "device").

A case may be designed to attempt to protect a device from collisions or impacts. A case may be designed to attempt to protect a device from contaminants or contamination. Such contaminants or contamination may include liquids, particulates, heat, cold, moisture, humidity, dirt, dust, and/or any other externally generated influence that may compromise the functionality of the device. A case may also be designed to protect interactive parts of the device (for example, touch screen) from scratching.

It may be desirable to have a case that provides improved protection from collisions/impacts, contamination, and/or scratching.

SUMMARY

A case for holding a portable electronic device includes an anterior portion, a posterior portion, a boot, a transparent covering portion, and a plurality of fasteners. The anterior portion may have a front surface, a back surface, and a screen window. The posterior portion may have a front surface and a back surface. The boot may be flexible and may fit around the portable electronic device. The boot may have a sidewall, a flange extending inwardly from the sidewall, and a rear panel. The sidewall may be between the anterior portion and the posterior portion. The transparent covering portion may have an outer edge, a front surface, and a back surface. The outer edge may be between the boot and the back surface of the anterior portion. The plurality of fasteners may fasten the anterior portion and the posterior portion.

The case may include an audio port cover including an aperture, an arm extending from the aperture, and a plug on a bottom surface of the arm. The audio port cover may be secured to the case by a connection through the aperture. The arm may rotate about the aperture of the audio port cover and along a primary plane of the boot. The plug may engage in an audio port aperture in the sidewall of the boot.

The case may include an audio port hollow region within the sidewall of the boot. The audio port hollow region may be located to allow access to an audio port of the portable electronic device. The case may also include an audio port aperture through the sidewall of the boot. The audio port aperture may be located to allow access into the audio port hollow region and to the audio port of the portable electronic device. The case may also include an acoustic piping aperture through the sidewall of the boot. The acoustic piping aperture may be located to allow sound to enter the audio port hollow region even when the audio port aperture is plugged. The case may have a bumper within the sidewall of the boot. The bumper may have hollow regions separated by partitions. The partitions may comprise a truss.

The case may include vibration switch actuator, which may have a post and a cup. The cup may be located on a lateral surface of the post. The post may slidably extend through vibration switch actuator apertures in the sidewall of the boot. The cup may be arranged to interface with a vibration switch on the portable electronic device and switch the vibration switch ON and OFF as the post slides in and out. The vibration switch actuator may include an ON detent and an OFF detent. The boot may include a stop nub located to engage with the ON detent and the OFF detent. The stop nub may be arranged to alternately snap into the ON detent or the OFF detent. This may stop a movement the vibration switch actuator and provide a physical pulse to indicate a change in position of the vibration switch actuator.

The boot may include wiper seals proximate the vibration switch actuator apertures in the boot. The wiper seals may be located to form seals with the vibration switch actuator. The posterior portion may include a rear window. The boot may also include a rear window and a rear window seal surrounding the rear window. The rear window seal of the boot may compress against the back side of the device.

The sidewall of the boot may include at least one actuator (for example, volume up actuator, a volume down actuator, or a power actuator) arranged to receive an actuation force on an outer area of the sidewall and to translate the actuation force towards a switch on the portable electronic device. The anterior portion may include a lip configured to compress an outer region of the transparent covering portion against the portable electronic device.

The case may include a communications interface door assembly including a communications interface door plug, wherein the communications interface door plug is configured to engage in a communications interface aperture in the boot sidewall of the boot. The communications interface door assembly may include a flexible hinged portion attached to the posterior portion and including a plug mating portion that receives the communications interface door plug. The communications interface door plug may be rigid.

A boot for use in a case for a portable electronic device may include a rear panel and a sidewall extending from the rear pane. The side wall may include fastener apertures configured to receive a corresponding plurality of fasteners, an audio port hollow region located to allow access to an audio port of the portable electronic device, an audio port aperture located to allow access to the audio port hollow region, an acoustic piping aperture located to allow sound to enter the audio port hollow region even when the audio port aperture is plugged, a microphone aperture located to allow sound to pass through the sidewall to reach a microphone of the portable electronic device, a speaker aperture located to allow sound emanating from a speaker of the portable electronic device to pass through the sidewall, a communications interface aperture located to allow access to a communications port of the portable electronic device, and at least one actuator.

The boot may also include an anterior portion groove configured to receive a ridge of an anterior portion, and a posterior portion groove configured to receive a ridge of a posterior portion.

The sidewall may include hollow regions separated by partitions. The partitions may comprise a truss. The sidewall may also include an audio port cover recess configured to accept a portion of an audio port cover. The sidewall further may also include vibration switch actuator apertures located to receive a vibration switch actuator. The sidewall may also

include a stop nub located to engage with an ON detent and an OFF detent of the vibration switch actuator. The sidewall may also include a plurality of wiper seals proximate the plurality of vibration switch actuator apertures, wherein the plurality of wiper seals are configured to form a seal with the vibration switch actuator.

The rear panel may also include a rear window and a rear window seal on the front surface of the rear panel around the rear window.

BRIEF DESCRIPTION OF THE FIGURES

FIGS. **1**A-**1**G illustrate different views of a portable electronic device case, according to techniques of the present application.

FIGS. **2**A and **2**B illustrate an anterior portion of a portable electronic device case, according to techniques of the present application.

FIG. **3** illustrates an audio port cover of a portable electronic device case, according to techniques of the present application.

FIGS. **4**A and **4**B illustrate a vibration switch actuator and a portion of a boot of a portable electronic device case, according to techniques of the present application.

FIGS. **5**A and **5**B illustrate different views of a boot portion of a portable electronic device case, according to techniques of the present application.

FIG. **6** illustrates a posterior portion of a portable electronic device case, according to techniques of the present application.

FIGS. **7**A-**7**C illustrate a communications interface door assembly of a portable electronic device case, according to techniques of the present application.

FIG. **8** illustrates a plurality of different example embodiments of the bumper of the sidewall of the boot including hollow regions having different shapes.

The foregoing summary, as well as the following detailed description of certain techniques of the present application, will be better understood when read in conjunction with the appended drawings. For the purposes of illustration, certain techniques are shown in the drawings. It should be understood, however, that the claims are not limited to the arrangements and instrumentality shown in the attached drawings. Furthermore, the appearance shown in the drawings is one of many ornamental appearances that can be employed to achieve the stated functions of the system.

DETAILED DESCRIPTION

For purposes of continuity, this application generally refers to a case **100**. However, specific attributes of the case **100** may stand alone or may be part of a case having different attributes from case **100** or a case having only some of the attributes of case **100**.

FIGS. **1**A-**1**G illustrate different views of a portable electronic device case **100** (or, more simply, "case"), according to techniques of the present application. FIG. **1**A is a perspective view of the front of the case **100**. FIG. **1**B is a perspective view of the rear of the case **100**. FIG. **1**C is an elevation view of the front of the case **100**. FIG. **1**D is an elevation view of the rear of the case **100**. FIG. **1**E is an exploded cross-sectional view of the case **100**. FIG. **1**F is a cross-sectional view of the case **100**. FIG. **1**G is an exploded perspective view of the case **100**.

The case **100** may include an anterior portion **110**, a receiver lens **120**, a transparent covering portion **130**, an audio port cover **140**, a vibration switch actuator **150**, a boot **160**, a posterior portion **170**, and a communications interface door assembly **180**. The case **100** may be designed to accommodate a portable electronic device **10** (or, more simply, "device"), such as a smart phone. While not limiting, the figures generally show a case **100** that accommodates the iPhone® 4 or 4S.

Generally, the case **100** may protect the device **10** from contamination. The device **10** may fit into the boot **160**. The transparent covering portion **130** may be aligned over the screen of the device **10**. The anterior and posterior portions **110**, **170**, may sandwich the boot **160** and the transparent covering portion **130**. Thus, the boot **160** and the transparent covering portion **130** may be between the anterior portion **110** and posterior portion **170**. By "between," it should be understood that the boot **160** and the transparent covering portion **130** need not be completely between or directly abutting the anterior portion **110** and/or posterior portion **170**. The boot **160** and transparent covering portion **130** may be between the anterior portion **110** and the posterior portion if only a portion of the boot **160** and transparent covering portion **130** is between the anterior portion **110** and/or the posterior portion **170**. The boot **160** and transparent covering portion **130** may be between the anterior portion **110** and/or the posterior portion **170** if the boot **160** and transparent covering portion **130** are between only a portion of the anterior portion **110** and/or the posterior portion **170**. Fasteners **101** (for example, bolts or socket head bolts) may be used to compress the device **10** and different parts of the case **100** together to enclose the device **10**.

As shown in FIGS. **1**E and **1**F, the device **10** may fit in the boot **160**. The anterior portion **110** and the posterior portion **170** may fit on or mate with the boot **160**. The transparent covering portion **130** may lie over the device **10**. The anterior portion **110** may include a lip **118** that compresses the transparent covering portion **130** onto the screen of the device **10** as the fasteners **101** are tightened.

As shown in FIG. **1**G, the receiver lens **120** may include a lens **122** (for example, acrylic or polycarbonate) and an adhesive **121**. The transparent covering portion **130** may include a lens **131** (for example, Gorilla Glass®) and an adhesive **132**. The case **100** may include various coverings **104** which may substantially protect the device **10** from contaminants. One or more of the coverings **104** may be substantially acoustically transparent or transmissive. Such coverings **104** may include a material such as Gore GAW324.

The boot **160** is illustrated in greater detail in FIGS. **1**E, **1**F, **5**A and **5**B. The boot **160** may include a rear panel **161**, a sidewall **162**, a flange **163**, and grooves **164**. The rear panel **161** may fit against the back of the device **10**. The rear panel **161** may include a rear window **161***b* and a rear window seal **161***a*. The rear window **161***b* may allow access (for example, access for light, sound, or touch) to a camera or light source on the device **10**. The rear window seal **161***a* may form a seal (to protect against contaminants) with the device **10** in response to the rear window seal **161***a* being compressed against the device **10**.

The sidewall **162** may wrap around the lateral sides of the device **10**. There may be a flange **163** that extends from a top region of the sidewall **162**. The rear panel **161**, sidewall **162**, and flange **163** may form a cavity. Outer regions of the device **10** may fit into the cavity, thereby securing the boot **160** to the device **10**. The boot **160** may include a material such as an elastomer. For example, the boot **160** may include silicone. The boot **160** may be relatively flexible or may have a hardness of approximately **65** as measured by a durometer on a Shore A scale. The boot **160** may be formed

as one unitary piece. The boot **160** itself may be used as a case, for example, without the anterior portion **110**, transparent covering portion **130**, and/or posterior portion **170**.

The sidewall **162** may or may not be solid. The sidewall **162** may include hollow regions. Also, the inner and outer contours of the sidewall **162** may include nooks, crannies, or other uneven contours. At least some of these areas may be considered to be part of the sidewall **162**. For example, as can be seen in FIG. **5**A, a hollow area on the inside of the sidewall **162** can be seen proximate the vibration switch actuator apertures **162***g*. This hollow region and the parts above and below this hollow region may be considered part of or included in the sidewall **162**.

The sidewall **162** may include one or more actuators **162***a*. Each actuator **162***a* may be pressed or released by a user to cause corresponding switches or buttons on the device **10** to be pressed or released. For example, the actuators **162***a* may interface with volume control or power control buttons or switches on the device **10**. Each actuator **162***a* may receive an actuation force from a user. The actuator **162***a* may then translate the actuation force towards a switch or a button on the device **10**.

The sidewall **162** may include an audio port aperture **162***j*, which opens into a hollow region **162***b* to allow access to an audio port (for example, a headset jack socket) in the device **10**. The device **10** may have a microphone proximate to the audio port. This microphone may be used in conjunction with noise cancellation processes to improve audio quality (for example, call quality) from the device. The audio port aperture **162***j* may allow access to this microphone as well. If the audio port aperture **162***j* is sealed (for example, with the plug **142** of the audio port cover **140**), the microphone may not effectively receive ambient noise. Consequently, the device **10** may not be able to perform effective noise cancellation.

To address this issue, the boot **160** may include one or more acoustic piping apertures **162***i* into the hollow region **162***b*—for example, one acoustic piping aperture **162***i* on the front side of the boot **160** and one acoustic piping aperture **162***i* on the back side of the boot **160**. The acoustic piping aperture **162***i* may allow sound to pass into the hollow region **162***b* and to the microphone proximate the audio port, even when the audio port aperture **162***j* is sealed. Corresponding acoustic piping apertures **116**, **175** may be provided in the anterior portion **110** and posterior portion **170** respectively. Thus, the apertures **116**, **175**, and **162***i* may allow noise cancellation to continue working even when the audio port aperture **162***j* has been sealed, for example, with the plug **142** of the audio port cover **140**.

To protect against contamination entering through the acoustic piping aperture(s) **162***i*, microphone hole coverings **104** may be used in conjunction with the acoustic piping apertures **162***i*. These coverings **104** may be substantially acoustically transparent or transmissive. Such coverings **104** may include a material such as Gore GAW324. On the back side, a hole covering **104** may fit between the boot **160** and the posterior portion **170** (for example, in a recessed area around a corresponding acoustic piping aperture in the posterior portion **170**). On the front side, a hole covering **104** may fit between the boot **160** and anterior portion **110** (for example, in a recessed area around a corresponding acoustic piping aperture in the anterior portion **110**).

The sidewall **162** may include a speaker aperture **162***c* and a microphone aperture **162***d*. These apertures **162***c*, **162***d* may allow sound to pass to and from a microphone or speaker on the bottom of the device **10**. The speaker aperture **162***c* and microphone aperture **162***d* may accommodate coverings **104**. These apertures may also accommodate inserts that carry the coverings. The coverings **104** may be secured in the boot **160** by inserting them into the apertures **162***c*, **162***d* from the inside of the boot **160** and then inserting the carriers into the apertures **162***c*, **162***d* from the inside. The apertures **162***c*, **162***d* may include ledges in the boot **160** that prevent the coverings **104** and carriers from being inserted too far into the boot **160** (or coming out the other side).

The sidewall **162** may include a communications interface aperture **162***e* that allows access to a communications port on the device **10** (for example, a 30-pin communications port). The sidewall **162** may also include a plurality of fastener apertures **162***f* that accommodate the fasteners **101** or accommodate the risers on the anterior portion **110**. Note, risers could also be on the posterior portion **170** or could be separate portions altogether. The sidewall **162** may include a plurality of vibration switch actuator apertures **162***g* (one on the front and one on the back) and an audio port cover recess **162***h*.

The sidewall **162** may also include a bumper **166**. The bumper **166** may extend along any part of the sidewall **162**. As shown, the bumper **166** extends along portions of the left, right, and top portions of the sidewall **162** of the boot **160**. The bumper **166** may include air pockets or hollow regions **166***b* within the sidewall **162** of the boot **160**. The bumper **166** may make the case **100** more shock resistant to impacts (for example, lateral-side impacts). The appearance of the bumper **166** shown in the drawings is one of many ornamental appearances of a bumper **166** that may be employed to achieve improved shock resistance.

As shown in FIGS. **5**A and **5**B, the bumper **166** may have a trussed design with partitions **166***a* (for example, trussed or zigzagging partitions) separating the hollow regions **166***b*. As shown in FIG. **8**, the bumper **166** may have other designs, such as air pockets **166***b* that are circular areas, diagonal line areas, rectangular areas, diamond areas, and straight line areas. The shape of the hollow regions **166***b* may determine the shape of the partitions **166***a*. These are just a few illustrative examples. Various other shapes (either regular or irregular) or combinations of shapes may be used.

The anterior portion **110** is illustrated in FIGS. **1**E, **1**F, **2**A and **2**B. The anterior portion **110** may include a receiver window **111** and fastener apertures **112**. The receiver window **111** may provide access (for example, access for light, sound, or touch) to an earpiece speaker and/or camera of the device **10**. The fastener apertures **112** may receive fasteners **101** (for example, bolts). A fastener aperture **112** may include a riser portion and a cup portion. An elongated portion of a fastener **101** may extend through the riser portion, while a head of the fastener may rest in the cup portion.

The anterior portion **110** may also include a screen window **113** and an actuator **114**. The screen window **113** may provide access (for example, access for light, sound, or touch) to a screen of the device **10** or to the transparent covering portion **130**. A user may interact with the screen of the device **10** through the screen window **113**. The actuator **114** may be pressed or released by a user to cause a corresponding switch or button on the device **10** to be pressed or released. The actuator **114** may receive an actuation force from a user. The actuator **114** may then translate the actuation force towards a switch (for example, a home button) on the portable electronic device **10**.

The anterior portion **110** may include a vibration switch actuator aperture **115** and an acoustic piping aperture **116**. The vibration switch actuator aperture **115** may receive a post **151** of a vibration switch actuator **150**. The acoustic piping aperture **116** may operate in conjunction with a corresponding acoustic piping aperture **162***i* of the boot **160**. The operations and configurations of these apertures will be discussed in greater detail below.

The anterior portion **110** may include a bezel **117**, a lip **118**, and a ridge **119**. The bezel **117** may have a beveled profile and may slope downwards from the top elevation of the anterior portion **110** towards the boot **160**. As can be seen in FIGS. **1**E and **1**F, the lip **118** may extend downwards from the top elevation of the anterior portion **110**. The lip **118** may be configured to extend past the flange **163** of the boot **160**. The bottom surface of the lip **118** may compress an outer region of the transparent covering portion **130** against the device **10**. The ridge **119** may be configured to mate with a corresponding groove **164** in the boot **160**. The ridge **119** may include one or more ribs which also mate with the corresponding groove **164**.

The audio port cover **140** is illustrated in FIG. **3**. The audio port cover **140** may include an audio port cover **140** aperture **143** and an arm **141**. A portion of the audio port cover around the aperture **143** may fit within the audio port cover recess **162***h* in the boot **160**. The audio port cover aperture **143** may secure to another portion of the case **100**, such that the arm **141** may rotate about the audio port cover aperture **143** and along a primary plane of the boot **160**. A fastener **101** or a riser encompassing a fastener may extend through the audio port cover aperture **143**.

The audio port cover **140** may also include a handle **144** and a plug **142**. The handle **144** may facilitate the operation of opening and closing the audio port cover **140**. When at one extent of the rotation of the audio port cover arm **141**, the plug **142** may engage in the audio port aperture **162***j* of the boot **160** so that the audio port of the device **10** may be protected from contaminants.

The vibration switch actuator **150** is illustrated in in FIG. **4**A. The vibration switch actuator **150** may include a post **151**, a vibration switch cup **152**, and vibration switch detents **153**. The vibration switch cup **152** may be located on or within a lateral side of the post **151**. The vibration switch cup **152** may be configured to receive a vibration switch on the device **10**. The detents **153** may be located on or within the post **151**. The detents **153** may include an ON detent and an OFF detent.

The vibration switch actuator **150** is illustrated in conjunction with the boot **160** in FIG. **4**B. The boot **160** may accommodate the vibration switch actuator **150** through the vibration switch actuator apertures **162***g*. The vibration switch actuator **150** may slidably move transversely across the sidewall **162** as the post **151** slides through the vibration switch actuator apertures **162***g*. The boot **160** may include wiper seals **168** near or as part of the vibration switch actuator apertures **162***g*. The wiper seals **168** protect against contaminants by forming a seal and wiping contaminants off of the post **151** as the post **151** moves across the wiper seals **168**.

The boot **160** may include a stop nub **167** that engages the detents **153**. The stop nub **167** may alternately snap into the ON detent **153** or the OFF detent **153** as the vibration switch actuator **150** moves transversely across the sidewall **162**. The stop nub **167** may assist in stopping movement of the vibration switch actuator **150**. The vibration switch cup **152** may also assist in stopping movement when it abuts the boot **160**. When the stop nub **167** snaps into a detent **153**, it may cause a physical pulse. Such a pulse may provide tactile feedback to a user to indicate a change in position of the vibration switch actuator **150** and the corresponding vibration switch on the device **10**.

The posterior portion **170** is illustrated in FIG. **6**. The posterior portion **170** may include a rear aperture **171** and fastener receptacles **172**. The rear aperture **171** may provide access (for example, access for light, sound, or touch) to a camera or light source on the back of the device **10**. The fastener receptacles **172** may be threaded, and may receive the fasteners **101**. The fastener receptacles may also receive inserts (shown, for example, as **103** in FIG. **1**G), which, in turn, receive the fasteners **101**. While the case **100** is illustrated with fastener heads accessible from the front of the case **100**, it would also be possible to reverse the fasteners **101** and corresponding portions on the anterior portion **110** and the posterior portion **170**, such that the fastener heads are accessible from the back of the case **100**.

The posterior portion **170** may also include a ridge **178**. As can be seen in FIGS. **1**E and **1**F, the ridge **178** may be configured to mate with a corresponding groove **165** in the boot **160**. The ridge **178** may include one or more ribs which also mate with the corresponding groove in the boot **160**.

The posterior portion **170** may also include a communication door assembly connecting portion **173**, a vibration switch actuator aperture **174**, and an acoustic piping aperture **175**. The communication door assembly connecting portion **173** may connect with the communication door assembly **180**. The vibration switch actuator aperture **174** may correspond to a similar aperture **162***g* in the boot **160**, and may accommodate the post **151** of the vibration switch actuator **150**. The acoustic piping aperture **175** may correspond to a similar aperture **162***i* in the boot **160**.

The posterior portion **170** may also include a bezel **176** and a window **177** to accommodate a rear panel **161** of the boot **160**. The bezel **176** may have a beveled profile and may slope upwards from the bottom elevation of the anterior portion **110** towards the boot **160**. The window **177** may allow the rear panel **161** of the boot **160** to be directly accessible to a user.

The communications interface door assembly **180** is illustrated in FIGS. **7**A-**7**C. The communications interface door assembly **180** may include a hinged portion **181** and a plug **182**. The hinged portion **181** may include a connecting portion **184**, a door **185**, and a plug receiving portion **183** configured to receive the plug **182**. The hinged portion **181** may be flexible and may include a material such as silicone. The hinged portion may include a living hinge between the connecting portion **184** and the door **185**. The connecting portion **184** may connect with the corresponding connecting portion **173** on the posterior portion **170**.

The door **185** may include the plug receiving portion **183** which is configured to receive the plug **182**. The plug **182** may be rigid. The plug **182** may include a material such as anodized aluminum. The plug **182** may include a door mating portion **187** that mates with the plug receiving portion **183** on the door **185**. The plug **182** may also include a port cover portion **186** that fits through the communication port aperture **162***e* of the boot **120** and covers the communications port on the device **10**.

It will be understood by those skilled in the art that various changes may be made and equivalents may be substituted without departing from the scope of the novel and non-obvious techniques disclosed in this application. In addition, many modifications may be made to adapt a particular situation or material to the teachings of the novel techniques without departing from its scope. Therefore, it is

intended that the novel techniques not be limited to the particular techniques disclosed, but that they will include all techniques falling within the scope of the appended claims.

The invention is claimed as follows:

1. A flexible boot for at least partially encompassing an electronic device, said flexible boot comprising:

a rear panel; and

a sidewall extending from the real panel, the sidewall including an inner surface, an outer surface, and a plurality of compressible hollow regions positioned between the inner surface and the outer surface, the rear panel and the inner surface of the sidewall at least partially defining a cavity configured to receive the electronic device.

2. The flexible boot of claim **1**, wherein the sidewall includes a plurality of lateral sides each including at least one of the plurality of hollow regions, the plurality of lateral sides of the sidewall extending parallel to a plurality of lateral sides of the electronic device when the electronic device is received into the cavity.

3. The flexible boot of claim **1**, wherein at least one of the hollow regions extends completely through the sidewall.

4. The flexible boot of claim **1**, wherein the plurality of compressible hollow regions extend into the side wall in a direction parallel to the inner surface.

5. The flexible boot of claim **1**, wherein the rear panel includes a front surface and at least a portion of the front surface of the rear panel is configured to support the electronic device when the electronic device is received into the cavity.

6. A flexible boot for at least partially encompassing an electronic device, said flexible boot comprising:

a rear panel; and

a sidewall extending from the rear panel and including a plurality of lateral sides, the rear panel and the sidewall at least partially defining a cavity configured to receive the electronic device, the sidewall including a compressible bumper along at least a portion of each of the lateral sides, the compressible bumper including a plurality of hollow regions.

7. The flexible boot of claim **6**, wherein the plurality of lateral sides of the sidewall extend parallel to a plurality of lateral sides of the electronic device when the electronic device is received into the cavity.

8. The flexible boot of claim **6**, wherein at least one of the hollow regions extends completely through the sidewall.

9. The flexible boot of claim **8**, wherein the rear panel includes a front surface, and wherein at least one of the hollow regions extends in a direction parallel to a plurality of lateral sides of the electronic device when the electronic device is received into the cavity.

10. The flexible boot of claim **6**, wherein the rear panel includes a front surface, and wherein at least a portion of the front surface of the rear panel is configured to support the electronic device when the electronic device is received into the cavity.

11. A case for housing an electronic device, the electronic device having a screen, a back side, and a plurality of lateral sides offsetting the screen from the back side, said case comprising:

an elastomeric boot including a sidewall, the elastomeric boot being configured to receive the electronic device such that the lateral sides of the electronic device are at least partially surrounded by the sidewall; and

a rigid posterior portion defining an opening therethrough through which a portion of the elastomeric boot extends.

12. The case of claim **11**, wherein the elastomeric boot further comprises a rear panel having a front surface and a back surface.

13. The case of claim **12**, wherein the portion of the elastomeric boot that extends through the opening includes the back surface of the rear panel.

14. The case of claim **12**, wherein at least a portion of the front surface of the rear panel is configured to support the back side of the electronic device when the electronic device is received into the elastomeric boot.

15. The case of claim **12**, wherein the sidewall of the elastomeric boot extends from the rear panel.

16. The case of claim **15**, wherein the sidewall includes an inner surface, an outer surface, and a plurality of compressible hollow regions positioned between the inner surface and the outer surface, the rear panel and the inner surface of the sidewall at least partially defining a cavity configured to receive the electronic device.

17. The case of claim **16**, wherein at least one of the plurality of hollow regions extends parallel to the lateral sides of the electronic device when the electronic device is received into the cavity.

18. The case of claim **17**, wherein at least one of the hollow regions extends completely through the sidewall.

19. The case of claim **11**, further comprising a rigid anterior portion attachable to the rigid posterior portion with the elastomeric boot therebetween.

20. The case of claim **11**, wherein the sidewall includes an inner surface, an outer surface, and a plurality of compressible hollow regions positioned between the inner surface and the outer surface.

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